

Employment of Health Aides in a Tuberculosis Program

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IN JANUARY 1964 the New York City Department of Health began using a new category of employee, the health aide, in its tuberculosis program. The health aide project was financed by the New York and Brooklyn Tuberculosis and Health Associations until July 1964, when Federal funds were made available.

The idea of using nonprofessional people in a tuberculosis program is not new and did not originate with this health department. What may be unique is the request by the bureau of public health nursing that these aides be assigned to the nursing bureau to be recruited, oriented, trained, and supervised by the nursing staff. The request was granted. The program was one of a number of measures used by the department to reverse the rising rate of new cases of tuberculosis in New York City. The program's three main objectives were to raise the rate of patient response for survey cases of tuberculosis, known lapsed cases, and contacts of tuberculosis cases; to close the gap between the time of survey diagnosis and instituting medical supervision; and to find the source of infection for selected index cases by means of intensified followup.

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It was apparent that some searching questions would have to be answered. Why would a bureau of public health nursing, with a staff working at maximum capacity and with four levels of professional and semitechnical workers, want to include still another kind of employee? Isn't this further fragmentation? Are there not inherent dangers in delegating work to nonprofessional workers that has heretofore always been considered the responsibility of the public health nurse?

Obviously, the heavy workload carried by a public health nursing staff demands that many ways be tried to implement a program of such importance as the tuberculosis control program to so large and diverse a population as that of New York City. Inherent dangers always lie in further fragmentation and delegation of work, but the practice of public health nursing today frequently demands taking a calculated risk, especially when it is well known that other health needs of an even more complex nature will continue to arise.

With these ideas in mind, the key word would appear to be "responsibility." The staff of the bureau of public health nursing still holds itself responsible for the quality of nursing care it gives to the community. It also knows that with a scarce commodity, in great demand, it must always be ready to account to the public, to the department, and to the nursing profession. It must show that it is spending its re-

sources as efficiently as it knows how. Thus by including health aides in its staff, the bureau increased rather than decreased its responsibility.

Preparation for Program

After deciding to use health aides, the next and perhaps the most difficult task was defining the job, the roles, and the functions of the total nursing staff as they would be affected by the new health aide program. A small working committee, representing the various levels of nursing, was appointed. The specific charge to this committee was identifying the work elements in the program that could be delegated to these new employees.

A job description was needed as well as qualifications for employment of the health aides. The committee recommended that the aide qualifications be relatively simple, such as being able to communicate easily with the patients as well as the professional staff, keeping simple records, using the telephone, and performing routine clerical tasks. A high school diploma would be desirable, although it was discovered later that one of the most successful health aides did not graduate from high school.

The job description required the health aides, under the direction of the supervising public health nurse in the local health district and with adequate clerical help, to—

- Initiate followup of mass tuberculosis X-ray survey recalls, including telephone calls, letters, and home visits.

- Make home visits, on a selective basis, to known tuberculosis patients not currently under care (referred to as lapsed cases).

Initially, it had been thought that the health aides would work solely in the mass survey program. However, the nursing staff has long been plagued with trying to reach patients with diagnosed cases of tuberculosis who have signed out of hospitals at their own risk and have failed to report to clinics for continued treatment. These patients (referred to as lapsed cases) have been, in many instances, the ones whom the public health nurses have repeatedly attempted to visit without finding them at home.

If the bureau is notified that a patient with a diagnosed case has changed his residence, the public health nurse must make a trace visit to find the patient and, when necessary, bring him

back under medical supervision. Almost without exception, the patients live in districts best described as depressed areas, characterized by deteriorated tenements or low-cost housing projects. It often means that a nurse may have to knock on more than 50 doors in one dwelling unit, and spend as much as 45 to 60 minutes per trace visit, in attempting to locate the patient in question.

The staff of the bureau of public health nursing, whenever developing new or different methods of rendering service, always plans for education, not just for the new members but for the present members as well. Thus they planned simultaneously for education as well as administration. The brief training program for the health aides provided orientation to the department and information on what the department would expect of the employee and what the employee could expect of the department. Emphasis was placed on what the health aide would be able to do and, equally important, what he would not be able to do. The staff as well as the supervising public health nurses were asked to participate, with the thought that if this program was to continue it should be absorbed into the regular tuberculosis control programs in the districts.

Implementation of Program

A well-qualified public health nurse supervisor was assigned to coordinate the program. It was her responsibility to recruit, interview, and assign applicants, assist in the education program, and interpret instructions to the staff. Direct supervision of the health aides was not a part of her assignment for deliberate reasons. If these workers were to be considered as part of the nursing staff, then the responsibility for their supervision should belong to district supervisory staffs. Unidentified supervision could confuse and possibly isolate the health aides. Therefore, to be effective, channels of authority and responsibility had to be clearly defined and not fragmented or divided among various disciplines and program directors.

The supervisory staff participated in all aspects of planning the objectives, the guidelines, and a program of education. The entire process required 2 weeks. The program was

ready to be launched, with the clear understanding that adjustments would be necessary since there were no precedents on which to rely.

A budget justification had to be written providing assurance that the health aide was truly a new type of worker in the bureau of public health nursing. Salary and fringe benefits had to be considered. The protocol had to show clear distinction between the job of this new worker and that of ancillary workers already employed by the bureau.

The nurse supervisor coordinating the total project recruited health aides from the New York State Employment Service, local community agencies anxious to find employment for their clients, the city department of welfare, and similar sources.

All district supervising nurses had been called in for a series of three meetings to acquaint them with the program and to help them plan for the assignment of the new workers. Then the supervising public health nurses directly responsible for on-the-job supervision and training of the health aides could be oriented to the project by the district supervising nurses without the expensive, time-consuming, and often unprofitable use of centralized training. It was assumed that these supervisors would be in the best position to adapt the training necessary to meet the needs of their local districts.

By January 1964 a total of 20 health aides—all except one were men—had been recruited, trained, and assigned to 11 health districts in New York City. Their assignments were planned on the basis of the areas in which mass survey programs would be held and the districts with a backlog of recalcitrant patients and trace visits. It was understood that the health aides would be transferred from one district to another as required. They were fully aware of this arrangement and also that they would be expected to work evenings, holidays, and weekends and would be visiting at times and in places where it would be inappropriate for public health nurses to visit, such as transient men's lodging houses or bars and grills which patients might be known to frequent.

With only 20 health aides, we cannot say that this is one of the big projects the bureau of public health nursing has started. However, such projects are helpful in deciding

whether new approaches to old problems should be developed, considering the cost in professional time, money, and results—all of which must be weighed carefully.

Evaluation of Program

Evaluation had two components: the first was as statistical and objective as possible and the second, of a more subjective nature, was based on reports from the nursing supervisors and medical staff. Since the staff members have had a better than nodding acquaintance with the impact such reporting has on future planning, they tend to be quite factual. If they say, "It's good because we like it," they know they must say why it is good and why they like it.

The third objective of the program, intensive family followup of positive tuberculin reactions in children, has never been satisfactorily carried through. Although the objective is considered to be desirable, we could not measure its value in the length of time we had to pursue it in the program. Perhaps this objective could be considered one of our goals for the future.

Descriptive and comparative statistics. From January to June 30, 1964, the 20 health aides visited approximately 2,400 homes and performed other duties, supporting the follow-up program, in 17 of the 30 health districts of New York City.

From March 16 to June 30, 1964, all the health aides completed case-investigation reports whose purpose was to provide a quantitative description of the aides' success in handling the various types of assigned cases.

During this period, 1,727 case-investigation reports were filled out and received at the central office, of which 1,468 were complete. One or more of the dates of inception, assignment, or closing of a case were missing or inconsistent on the other 259 forms. Data from the 1,727 forms were used for all the tables except those requiring the missing dates.

A cross-check of the number of visits reported on the case-investigation forms with the number reported on the health aide's daily report—a time record collected mainly for administrative purposes—revealed a discrepancy of ap-

proximately 15 percent. The direction of the discrepancy indicated that some case-investigation forms could be missing or that the number of visits possibly were underreported on the case-investigation forms or overreported on the time records. The second possibility was thought to be the most likely, as the number of visits recorded on the case-investigation form required recall by the health aide. The health aides resolved the cases in the following manner:

<i>Disposition of cases</i>	<i>Number</i>
Already under medical supervision.....	129
Returned to or brought under medical supervision	1, 234
Located but not brought under medical supervision	168
Patients moved out of town.....	12
Patients could not be located.....	134
Other	50
Total	1, 727

Including the 129 patients under medical supervision with the 1,234 returning to or brought under medical care gave a response rate of 78.9 percent.

The case investigations on which the health aides worked were initiated for various reasons, and the rate of response varied with these reasons, as can be seen in table 1. The "hospital discharges" refer to tuberculosis patients who were to be kept under medical supervision while outside the hospital.

Table 1. Response rates achieved by health aides on case investigations, by reason for investigation

Reason for investigation	Total cases	Responded	Other disposition	Percent responded
X-ray survey call-in.....	806	704	102	87. 3
Lapse of tuberculosis clinic appointment.	411	302	109	73. 5
Irregular hospital discharge.....	69	49	20	71. 0
Regular hospital discharge.....	35	21	14	60. 0
Contact or associate.....	257	186	71	72. 4
Trace visit.....	89	52	37	58. 4
Other.....	60	49	11	81. 7
Total.....	1, 727	1, 363	364	78. 9

Table 2. Response rates achieved by health aides for cases with various diagnoses

Diagnosis	Total cases	Responded	Other disposition	Percent responded
Active tuberculosis.....	419	303	116	72. 3
Activity of tuberculosis undetermined.....	93	70	23	75. 3
Inactive tuberculosis.....	375	304	71	81. 1
Neoplasm.....	40	36	4	90. 0
Other.....	800	650	150	81. 3
Total.....	1, 727	1, 363	364	78. 9

The X-ray survey call-in cases usually are the easiest to close successfully. This belief is supported by their response rate, which was 87.3 percent—higher than for any other type of case (table 1).

Since different priorities—active tuberculosis and neoplasms received the highest priorities—were set for the various possible diagnoses, it is interesting to examine the degree of success, as evidenced by the response rates, achieved by the health aides for cases with various diagnoses (table 2). "Other" consisted chiefly of contacts of active tuberculosis cases and diagnoses other than tuberculosis.

Since patients with active tuberculosis were given the highest priority for followup, it might seem puzzling that, of all the diagnoses, their rate of response was the lowest. A partial answer may be found in the relative composition of the diagnoses according to the reason for the investigation (table 3).

The active tuberculosis cases included only 11.9 percent picked up by the X-ray survey, while 88.1 percent derived from lapses in chest-clinic appointments, hospital discharges, and similar cases (table 3). However, 57.8 percent of the cases diagnosed as other than active tuberculosis were survey X-ray cases.

The high response rate for survey X-ray cases probably was due to the high degree of motivation of these particular patients, as evidenced by the fact that, initially, they volunteered to be X-rayed. The patients with lapses in clinic appointments and hospital discharges may have had a long history of resistance to accepting medical supervision.

Table 3. Case diagnoses, by reason for investigation

Diagnosis	Survey call-in		All other reasons		Total	
	Number	Percent of total	Number	Percent of total	Number	Percent of total
Active tuberculosis.....	50	11.9	369	88.1	419	100
All other.....	756	57.8	552	42.2	1,308	100
Total.....	806	46.7	921	53.3	1,727	100

In addition to the descriptive information collected on the case-investigation forms, the staff attempted to evaluate the impact of the health aides by using the information available on the survey X-ray forms. In 1963 and 1964 the survey X-ray units visited 13 of the 17 districts where the health aides were employed in 1964. The intent was to compare the response rates for the 1963-64 survey call-ins and to see whether the work of the health aides had made any difference. In 1963 the X-ray survey program was concentrated between the dates studied; in 1964 it covered the entire calendar year. Hence the number of call-ins studied in 1964 represents only a portion of the call-ins for that year (table 4).

The response rates shown in the first three tables were based on cases handled exclusively by health aides, while the 1963 cases (table 4) were investigated by nurses alone and the 1964 cases, by both health aides and nurses.

Tests of the differences in the response rates for the 2 years showed an especially marked statistical significance for a subgroup of seven districts where the health aides worked on a sizable number of survey call-ins. Examination of the data, district by district, showed wide variations in the relationship of the response rates between the 2 years and indicated that

Table 4. Response rates for 1963-64 X-ray survey call-ins in districts where health aides were employed in 1964

Time period studied	Total call-ins studied	Responded	Other disposition	Percent response
March 11-June 24, 1963	4,300	3,133	1,167	72.9
March 1-June 30, 1964	2,635	2,129	506	80.8

factors other than employment of the health aides probably were operating in these districts. With the data available, it was impossible to establish a normal year-to-year variation in the response rate for call-ins. Owing to this and the fact that it was not possible for us to choose a random sample of control districts because of administrative limitations, it was difficult to attribute the rise in response rates from 1963 to 1964 exclusively to health aides.

Combining the information available on the 1963 survey forms and the 1964 case-investigation forms, using only the 1,468 completed forms, showed that the time it took for people to accept medical supervision after they had been X-rayed was reduced from 38 days in 1963 to 26 days in 1964. The latter figure refers only to cases handled by health aides.

Statistical conclusions. Examination of the descriptive and comparative data shows that many of the comparisons are favorable to the health aide program. However, the exigencies of tuberculosis control did not permit a design that could isolate the effect of the health aides from the effects of other factors. It is difficult to draw any clear conclusions as to the worth of the program from the statistical comparison alone.

Staff reports. We are conscious of making a relatively short-term evaluation. By no means should it be accepted as a final appraisal. But it was important to appraise the program early so that a habit of thinking could be established. Too frequently, public health workers are unprepared when they are suddenly called upon to justify the existence of a program that has continued for years in peace and complacency.

The medical and nursing staffs are in complete agreement that the health aides perform a valuable ancillary service to public health

nursing. One example of their usefulness, duplicated frequently, concerns a family which the public health nurse had visited many times in an effort to see the patient and to persuade him and his contacts to seek clinic care. The health aide made a night visit and found the patient at home. The language of both the patient and the health aide was Spanish, by choice, and the aide was successful in communicating to the patient the need and wisdom of placing himself and his family under medical supervision. The patient, his wife, and their eight children came to the clinic. Four of the children are now on chemotherapy, one is hospitalized, and three are supervised regularly in the clinic, as is the patient.

Such instances of success for the health aide should not be interpreted as failure on the part of the nurse. Rather, the public health nurse and her supervisor understand what is being attempted and accept the help they have said they needed. They provide professional supervision of the health aides, interpret the problem, and give the guidance necessary to assist the aides in understanding their job, while they maintain responsibility, with the clinic physician, for total management of the case.

On the basis of experience, the bureau of public health nursing could use at least 40 additional health aides. Moreover, the bureau is taking a close look at all its programs because there appears to be sufficient evidence that the aides could well be used in other services. It should be possible to find women, as well as men, in the community who are looking for employment, who could be easily trained and supervised, and who could perform useful functions in maternal and child health programs.

Summary

In December 1964 the bureau of public health nursing, New York City Department of

Health, was given a sum of money by the New York and Brooklyn Tuberculosis and Health Associations to hire health aides—as one facet of a program designed to reverse the rising rate of tuberculosis in New York City. In joint discussions, the bureau drew up plans and objectives, set a budget, and agreed on a method of procedure. From employment and welfare agencies, the nurse supervisor was able to recruit 20 health aides. All except one were men. Beginning July 1964, the project has been financed by Federal funds.

From March 16 to June 30, 1964, all the health aides completed case-investigation reports whose purpose was to give a quantitative description of the aides' success in handling the various types of assigned cases. During this period, 1,727 case-investigation reports were filled out, of which 1,468 were complete.

Information on the completed forms showed that the time it took for people to accept medical supervision after they had been X-rayed was reduced from 38 days in 1963 to 26 days in 1964. The latter figure refers only to cases handled by health aides.

Experience and evaluation suggest that health aides can make a valuable contribution in the control of tuberculosis. If properly planned, the concept of their use can be extended to other programs, especially in metropolitan areas, where skilled professional workers are at a premium, demands for health services are reaching an alltime high, and new ways of extending health services must be explored.

One of the great values of this program appears to be the responsibility assumed by the voluntary agency. It exemplifies the ways in which such an agency, aware of community health needs, can cooperate with an official agency to meet these needs.